

IN THE CLAIMS:

1-65. (canceled)

~~166~~¹⁶⁷. (previously presented) An *H. pylori* bacterial strain, or an extract of an *H. pylori* bacterial strain, wherein the *H. pylori* bacterial strain has an flagellate phenotype resulting from a mutation in the *flbA* gene of the *H. pylori* bacterial strain.

~~267~~²⁶⁸. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ~~66~~¹⁶⁷, wherein the *flbA* gene is able to hybridize, under conditions of stringency, with a probe corresponding to a nucleotide fragment from *H. pylori*, which has been amplified using two oligonucleotides having the following sequences:

OLF1bA-1: ATGCCTCGAGGTCGAAAAGCAAGATG (SEQ ID NO:1),

OLF1bA-2: GAAATCTTCATACTGGCAGCTCCAGTC (SEQ ID NO:2).

~~368~~³⁶⁹. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ~~66~~¹⁶⁷, wherein the *flbA* gene comprises SEQ ID NO: 6.

~~469~~⁴⁷⁰. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ~~66~~¹⁶⁷, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

⁵~~70~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹~~60~~, wherein the *H. pylori* bacterial strain also lacks the flagellum sheath.

⁶~~71~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ⁵~~70~~, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

⁷~~72~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ⁶~~60~~, wherein the *H. pylori* bacterial strain is obtained from strain N6 having deposit Accession No. NCIMB 40512.

⁸~~73~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹~~60~~, wherein the *H. pylori* bacterial strain is strain N6flbA⁻ having deposit Accession No. NCIMB 40747.

⁹~~74~~. (previously presented) The extract of an *H. pylori* bacterial strain according to claim ¹~~60~~, wherein the bacterial extract is a total bacterial extract.

¹⁰~~75~~. (previously presented) The extract of an *H. pylori* bacterial strain according to claim ¹~~60~~, wherein the bacterial extract is a n-octyl glucoside extract.

¹¹~~26~~. (previously presented) The extract of an *H. pylori* bacterial strain according to claim ¹~~60~~, wherein the bacterial extract is obtained after extracting with PBS or glycine.

¹²~~27~~. (previously presented) An *H. pylori* bacterial strain, or an extract of an *H. pylori* bacterial strain, wherein the *H. pylori* bacterial strain has an flagellate phenotype resulting from a mutation in the *flbA* gene of the *H. pylori* bacterial strain, and wherein the *H. pylori* bacterial strain does not express the FlaA and FlaB proteins.

¹³~~28~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~27~~, wherein the *flbA* gene is able to hybridize, under conditions of stringency, with a probe corresponding to a nucleotide fragment from *H. pylori*, which has been amplified using two oligonucleotides having the following sequences:

OLF1bA-1: ATGCCTCGAGGTCGAAAAGCAAGATG (SEQ ID NO:1),

OLF1bA-2: GAAATCTTCATACTGGCAGCTCCAGTC (SEQ ID NO:2).

¹⁴~~29~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~27~~, wherein the *flbA* gene comprises SEQ ID NO: 6.

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¹⁵
~~80~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~17~~, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

¹⁶
~~81~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~17~~, wherein the *H. pylori* bacterial strain also lacks the flagellum sheath.

¹⁷
~~82~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹⁶~~81~~, wherein the *H. pylori* bacterial strain does not express the hook protein (or anchoring protein) of the flagellum of *H. pylori*.

¹⁸
~~83~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~17~~, wherein the *H. pylori* bacterial strain is obtained from strain N6 having deposit Accession No. NCIMB 40512.

¹⁹
~~84~~. (previously presented) The *H. pylori* bacterial strain, or extract of an *H. pylori* bacterial strain, according to claim ¹²~~17~~, wherein the *H. pylori* bacterial strain is strain N6flbA⁻ having deposit Accession No. NCIMB 40747.

²⁰
~~85~~. (previously presented) The extract of an *H. pylori* bacterial strain according to claim ¹²~~17~~, wherein the bacterial extract is a total bacterial extract.

²¹
~~86.~~ (previously presented) The extract of an *H. pylori* bacterial strain
according to claim ¹²~~17~~, wherein the bacterial extract is a n-octyl glucoside extract.

²²
~~87.~~ (previously presented) The extract of an *H. pylori* bacterial strain
according to claim ¹²~~17~~, wherein the bacterial extract is obtained after extracting with PBS
or glycine.